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**Search Results - Record(s) 1 through 12 of 12 returned.**☐ 1. Document ID: US 6826559 B1**Using default format because multiple data bases are involved.**

L11: Entry 1 of 12

File: USPT

Nov 30, 2004

US-PAT-NO: 6826559

DOCUMENT-IDENTIFIER: US 6826559 B1

TITLE: Hybrid category mapping for on-line query tool

DATE-ISSUED: November 30, 2004

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ponte; Jay	Waltham	MA		

US-CL-CURRENT: 707/3; 707/101, 707/102, 707/104.1, 707/5

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	IPC Class	Claims	RWD	Draw Desc	Image
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☐ 2. Document ID: US 6643640 B1

L11: Entry 2 of 12

File: USPT

Nov 4, 2003

US-PAT-NO: 6643640

DOCUMENT-IDENTIFIER: US 6643640 B1

TITLE: Method for performing a data query

DATE-ISSUED: November 4, 2003

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Getchius; Jeffrey	Cambridge	MA		
Scofield; Cary	Litchfield	NH		

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Verizon Laboratories Inc.	Waltham	MA			02

APPL-NO: 10/ 071742 [PALM]

DATE FILED: February 7, 2002

## PARENT-CASE:

CROSS REFERENCE TO RELATED APPLICATIONS The present application is related to the following ten U.S. patent applications each filed on Mar. 31, 1999, each having its assignee of the entire

interest in common with the assignee of the entire interest of the present application, and having titles and serial numbers as follows: TARGETED BANNER ADVERTISEMENTS, Ser. No. 09/282,764; COMMON TERM OPTIMIZATION, Ser. No. 09/282,356; GENERIC OBJECT FOR RAPID INTEGRATION OF DATA CHANGES, Ser. No. 09/283,815; EFFICIENT DATA TRANSFER MECHANISM FOR SYNCHRONIZATION OF MULTI-MEDIA DATABASES, Ser. No. 09/283,816; NEW ARCHITECTURE FOR ON-LINE QUERY TOOL, Ser. No. 09/283,837; DATA ENHANCEMENT TECHNIQUES, Ser. No. 09/282,342; DATA MERGING TECHNIQUES, Ser. No. 09/282,495; TECHNIQUES FOR PERFORMING INCREMENTAL DATA UPDATES, Ser. No. 09/283,820; WEIGHTED TERM RANKING FOR ON-LINE QUERY TOOL, serial number 09/282,730; and, HYBRID CATEGORY MAPPING FOR ON-LINE QUERY TOOL, Ser. No. 09/283,268. This application is a division of U.S. application, Ser. No. 09/282,493, filed Mar. 31, 1999 now U.S. Pat. No. 6,393,415 the disclosure of which is hereby incorporated by reference herein. Benefits are claimed under 35 U.S.C. .sctn.120.

INT-CL: [07] G06 F 17/30

US-CL-ISSUED: 707/3; 707/1

US-CL-CURRENT: 707/3; 707/1

FIELD-OF-SEARCH: 707/1, 707/2, 707/3, 707/4, 707/5, 707/6, 707/10, 707/9, 707/104, 709/225, 380/25

PRIOR-ART-DISCLOSED:

#### U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<u>5898780</u>	April 1999	Liu et al.	380/25
<u>5941947</u>	August 1999	Brown et al.	709/225
<u>6092061</u>	July 2000	Choy	707/1
<u>6098066</u>	August 2000	Snow et al.	707/3
<u>6178418</u>	January 2001	Singer	707/3
<u>6347312</u>	February 2002	Byrne et al.	707/3

#### OTHER PUBLICATIONS

U.S. patent application Ser. No. 09/282,764, Targetted Banner Advertisements, filed Mar. 31, 1999.

U.S. patent application Ser. No. 09/282,356, Common Term Optimization, filed Mar. 31, 1999.

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U.S. patent application Ser. No. 09/282,730, Weighted Term Ranking for On-Line Query Tool, filed Mar. 31, 1999.

U.S. patent application Ser. No. 09/283,268, Hybrid Category Mapping for On-Line Query Tool, filed Mar. 31, 1999.

ART-UNIT: 2172

PRIMARY-EXAMINER: Shah; Sanjiv

ATTY-AGENT-FIRM: Suchyta; Leonard Charles Weixel; James K.

## ABSTRACT:

Disclosed is a system for performing online data queries. The system for performing online data queries is a distributed computer system with a plurality of server nodes each fully redundant and capable of processing a user query request. Each server node includes a data query cache and other caches that may be used in performing data queries. The data query, as well as request allocation, is performed in accordance with an adaptive partitioning technique with a bias towards an initial partitioning scheme. Generic objects are created and used to represent business listings upon which the user may perform queries. Various data processing and integration techniques are included which enhance data queries. An update technique is used for synchronizing data updates as needed in updating the plurality of server nodes. A multi-media data transfer technique is used to transfer non-text or multi-media data between various components of the online query tool. Optimizations for searching, such as the common term optimization, are included for those commonly performed data queries. Also disclosed is a system for targeting advertisements that are displayed to a user of the system.

34 Claims, 71 Drawing figures

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	KWIC	Draw Desc	Image
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☐ 3. Document ID: US 6578056 B1

L11: Entry 3 of 12

File: USPT

Jun 10, 2003

US-PAT-NO: 6578056

DOCUMENT-IDENTIFIER: US 6578056 B1

TITLE: Efficient data transfer mechanism for synchronization of multi-media databases

DATE-ISSUED: June 10, 2003

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Lamburt; Leonid	Marlboro	MA		

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Verizon Laboratories Inc.	Waltham	MA			02

APPL-NO: 10/ 135344 [PALM]

DATE FILED: April 30, 2002

## PARENT-CASE:

This application is a continuation application of U.S. application Ser. No. 09/283,816, filed Mar. 31, 1999 U.S. Pat. No. 6,421,683.

INT-CL: [07] G06 F 7/00

US-CL-ISSUED: 707/500.1; 707/7

US-CL-CURRENT: 715/500.1; 707/7

FIELD-OF-SEARCH: 707/1-5, 707/6, 707/7, 707/10, 707/100, 707/102, 707/200, 707/500.1, 707/501.1, 707/513, 709/200-201, 711/200, 711/202

## PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<u>5734887</u>	March 1998	Kingberg et al.	
<u>5809261</u>	September 1998	Lambrecht	710/21

ART-UNIT: 2172

PRIMARY-EXAMINER: Kindred; Alford

ATTY-AGENT-FIRM: Suchyta; Leonard Charles Weixel; James K.

## ABSTRACT:

Disclosed is a system for performing online data queries. The system for performing online data queries is a distributed computer system with a plurality of server nodes each fully redundant and capable of processing a user query request. Each server node includes a data query cache and other caches that may be used in performing data queries. The data query, as well as request allocation, is performed in accordance with an adaptive partitioning technique with a bias towards an initial partitioning scheme. Generic objects are created and used to represent business listings upon which the user may perform queries. Various data processing and integration techniques are included which enhance data queries. An update technique is used for synchronizing data updates as needed in updating the plurality of server nodes. A multi-media data transfer technique is used to transfer non-text or multi-media data between various components of the online query tool. Optimizations for searching, such as the common term optimization, are included for those commonly performed data queries. Also disclosed is a system for targeting advertisements that are displayed to a user of the system.

24 Claims, 71 Drawing figures

Full	Title	Citation	Front	Review	Classification	Date	Reference	State	Image	Claims	KWC	Draw Desc	Image
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☐ 4. Document ID: US 6519592 B1

L11: Entry 4 of 12

File: USPT

Feb 11, 2003

US-PAT-NO: 6519592

DOCUMENT-IDENTIFIER: US 6519592 B1

TITLE: Method for using data from a data query cache

DATE-ISSUED: February 11, 2003

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Getchius; Jeffrey	Cambridge	MA		
Scofield; Cary	Litchfield	NH		

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Verizon Laboratories Inc.	Waltham	MA			02

APPL-NO: 10/ 068938 [PALM]

DATE FILED: February 7, 2002

## PARENT-CASE:

CROSS REFERENCE TO RELATED APPLICATIONS This application is a division of U.S. application Ser. No. 09/282,493, U.S. Pat. No. 6,393,415 filed Mar. 31, 1999, the disclosure of which is hereby incorporated by reference herein. Benefits are claimed under 35 U.S.C. .sctn.120. The present application is related to the following ten copending United States patent applications each filed on Mar. 31, 1999, each having its assignee of the entire interest in common with the assignee of the entire interest of the present application, and having titles and serial numbers as follows: TARGETED BANNER ADVERTISEMENTS, Ser. No. 09/282,764; COMMON TERM OPTIMIZATION, Ser. No. 09/282,356; GENERIC OBJECT FOR RAPID INTEGRATION OF DATA CHANGES, Ser. No. 09/283,815; EFFICIENT DATA TRANSFER MECHANISM FOR SYNCHRONIZATION OF MULTI-MEDIA DATABASES, Ser. No. 09/283,816; NEW ARCHITECTURE FOR ON-LINE QUERY TOOL, Ser. No. 09/283,837; DATA ENHANCEMENT TECHNIQUES, Ser. No. 09/282,342; DATA MERGING TECHNIQUES, Ser. No. 09/282,495; TECHNIQUES FOR PERFORMING INCREMENTAL DATA UPDATES, Ser. No. 09/283,820; WEIGHTED TERM RANKING FOR ON-LINE QUERY TOOL, Ser. No. 09/282,730; and, HYBRID CATEGORY MAPPING FOR ON-LINE QUERY TOOL, Ser. No. 09/283,268.

INT-CL: [07] G06 F 17/30

US-CL-ISSUED: 707/6; 707/3, 707/5

US-CL-CURRENT: 707/6; 707/3, 707/5

FIELD-OF-SEARCH: 707/6, 707/3, 707/4, 707/5, 707/7, 707/2, 707/1

PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<u>5898780</u>	April 1999	Liu et al.	380/25
<u>5907837</u>	May 1999	Ferrel et al.	707/104.1
<u>5941947</u>	August 1999	Brown et al.	709/225
<u>6092061</u>	July 2000	Choy	707/1
<u>6098066</u>	August 2000	Snow et al.	707/3
<u>6178418</u>	January 2001	Singer	707/3
<u>6397228</u>	May 2002	Lamburt et al.	200/201

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**Search Results - Record(s) 1 through 12 of 12 returned.**☐ 1. Document ID: US 6826559 B1**Using default format because multiple data bases are involved.**

L11: Entry 1 of 12

File: USPT

Nov 30, 2004

US-PAT-NO: 6826559

DOCUMENT-IDENTIFIER: US 6826559 B1

TITLE: Hybrid category mapping for on-line query tool

DATE-ISSUED: November 30, 2004

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ponte; Jay	Waltham	MA		

US-CL-CURRENT: 707/3; 707/101, 707/102, 707/104.1, 707/5

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	Drawings	Image
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☐ 2. Document ID: US 6643640 B1

L11: Entry 2 of 12

File: USPT

Nov 4, 2003

US-PAT-NO: 6643640

DOCUMENT-IDENTIFIER: US 6643640 B1

TITLE: Method for performing a data query

DATE-ISSUED: November 4, 2003

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Getchius; Jeffrey	Cambridge	MA		
Scofield; Cary	Litchfield	NH		

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Verizon Laboratories Inc.	Waltham	MA			02

APPL-NO: 10/ 071742 [PALM]

DATE FILED: February 7, 2002

## PARENT-CASE:

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INT-CL: [07] G06 F 17/30

US-CL-ISSUED: 707/3; 707/1

US-CL-CURRENT: 707/3; 707/1

FIELD-OF-SEARCH: 707/1, 707/2, 707/3, 707/4, 707/5, 707/6, 707/10, 707/9, 707/104, 709/225, 380/25

PRIOR-ART-DISCLOSED:

#### U.S. PATENT DOCUMENTS

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<u>5941947</u>	August 1999	Brown et al.	709/225
<u>6092061</u>	July 2000	Choy	707/1
<u>6098066</u>	August 2000	Snow et al.	707/3
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<u>6347312</u>	February 2002	Byrne et al.	707/3

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U.S. patent application Ser. No. 09/283,837, New Architecture for On-Line Query Tool, filed Mar. 31, 1999.

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U.S. patent application Ser. No. 09/283,268, Hybrid Category Mapping for On-Line Query Tool, filed Mar. 31, 1999.

ART-UNIT: 2172

PRIMARY-EXAMINER: Shah; Sanjiv

ATTY-AGENT-FIRM: Suchyta; Leonard Charles Weixel; James K.

## ABSTRACT:

Disclosed is a system for performing online data queries. The system for performing online data queries is a distributed computer system with a plurality of server nodes each fully redundant and capable of processing a user query request. Each server node includes a data query cache and other caches that may be used in performing data queries. The data query, as well as request allocation, is performed in accordance with an adaptive partitioning technique with a bias towards an initial partitioning scheme. Generic objects are created and used to represent business listings upon which the user may perform queries. Various data processing and integration techniques are included which enhance data queries. An update technique is used for synchronizing data updates as needed in updating the plurality of server nodes. A multi-media data transfer technique is used to transfer non-text or multi-media data between various components of the online query tool. Optimizations for searching, such as the common term optimization, are included for those commonly performed data queries. Also disclosed is a system for targeting advertisements that are displayed to a user of the system.

34 Claims, 71 Drawing figures

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	Draw Desc	Image
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☐ 3. Document ID: US 6578056 B1

L11: Entry 3 of 12

File: USPT

Jun 10, 2003

US-PAT-NO: 6578056

DOCUMENT-IDENTIFIER: US 6578056 B1

TITLE: Efficient data transfer mechanism for synchronization of multi-media databases

DATE-ISSUED: June 10, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Lamburt; Leonid	Marlboro	MA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Verizon Laboratories Inc.	Waltham	MA			02

APPL-NO: 10/ 135344 [PALM]

DATE FILED: April 30, 2002

PARENT-CASE:

This application is a continuation application of U.S. application Ser. No. 09/283,816, filed Mar. 31, 1999 U.S. Pat. No. 6,421,683.

INT-CL: [07] G06 F 7/00

US-CL-ISSUED: 707/500.1; 707/7

US-CL-CURRENT: 715/500.1; 707/7

FIELD-OF-SEARCH: 707/1-5, 707/6, 707/7, 707/10, 707/100, 707/102, 707/200, 707/500.1, 707/501.1, 707/513, 709/200-201, 711/200, 711/202

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS



PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<u>5734887</u>	March 1998	Kingberg et al.	
<u>5809261</u>	September 1998	Lambrecht	710/21

ART-UNIT: 2172

PRIMARY-EXAMINER: Kindred; Alford

ATTY-AGENT-FIRM: Suchyta; Leonard Charles Weixel; James K.

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24 Claims, 71 Drawing figures

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☐ 4. Document ID: US 6519592 B1

L11: Entry 4 of 12

File: USPT

Feb 11, 2003

US-PAT-NO: 6519592

DOCUMENT-IDENTIFIER: US 6519592 B1

TITLE: Method for using data from a data query cache

DATE-ISSUED: February 11, 2003

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Getchius; Jeffrey	Cambridge	MA		
Scofield; Cary	Litchfield	NH		

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Verizon Laboratories Inc.	Waltham	MA			02

APPL-NO: 10/ 068938 [PALM]

DATE FILED: February 7, 2002

## PARENT-CASE:

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INT-CL: [07] G06 F 17/30

US-CL-ISSUED: 707/6; 707/3, 707/5

US-CL-CURRENT: 707/6; 707/3, 707/5

FIELD-OF-SEARCH: 707/6, 707/3, 707/4, 707/5, 707/7, 707/2, 707/1

PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

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<u>5941947</u>	August 1999	Brown et al.	709/225
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<u>6098066</u>	August 2000	Snow et al.	707/3
<u>6178418</u>	January 2001	Singer	707/3
<u>6397228</u>	May 2002	Lamburt et al.	200/201
<u>6421683</u>	July 2002	Lamburt	707/104

## OTHER PUBLICATIONS

U.S. patent application Ser. No. 09/282,764, Targetted Banner Advertisements, filed Mar. 31, 1999.

U.S. patent application Ser. No. 09/282,356, Common Term Optimization, filed Mar. 31, 1999.

U.S. patent application Ser. No. 09/283,815, Generic Object for Rapid Integration of Data Changes, filed Mar. 31, 1999.

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U.S. patent application Ser. No. 09/282,342, Data Enhancement Techniques, filed Mar. 31, 1999.

U.S. patent application Ser. No. 09/282,495, Data Merging Techniques, filed Mar. 31, 1999.

U.S. patent application Ser. No. 09/283,820, Techniques for Performing Incremental Data Updates, filed Mar. 31, 1999.

U.S. patent application Ser. No. 09/282,730, Weighted Term Ranking for On-Line Query Tool, filed Mar. 31, 1999.

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36 Claims, 71 Drawing figures

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☐ 5. Document ID: US 6496843 B1

L11: Entry 5 of 12

File: USPT

Dec 17, 2002

US-PAT-NO: 6496843

DOCUMENT-IDENTIFIER: US 6496843 B1

TITLE: Generic object for rapid integration of data changes

DATE-ISSUED: December 17, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Getchius; Jeffrey	Cambridge	MA		
Venugopal; Ramakrishnan	Chelmsford	MA		
Liu; Siping	Framingham	MA		

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Verizon Laboratories Inc.	Waltham	MA			02

APPL-NO: 09/ 283815 [PALM]

DATE FILED: March 31, 1999

## PARENT-CASE:

CROSS REFERENCE TO RELATED APPLICATIONS The present application is related to the following ten copending U.S. patent applications that were filed on Mar. 31, 1999. The titles and serial numbers of the aforementioned applications are as follows: TARGETED BANNER ADVERTISEMENTS, Ser. No. 09/282,764; COMMON TERM OPTIMIZATION, Ser. No. 09/282,356 EFFICIENT DATA TRANSFER MECHANISM FOR SYNCHRONIZATION OF MULTI-MEDIA DATABASES, Ser. No. 09/283,816; NEW ARCHITECTURE FOR ON-LINE QUERY TOOL, Ser. No. 09/283,837; DATA ENHANCEMENT TECHNIQUES, Ser. No. 09/282,342; DATA MERGING TECHNIQUES, Ser. No. 09/282,495; WEIGHTED TERM RANKING FOR ON-LINE QUERY TOOL Ser. No.

09/282,730; HYBRID CATEGORY MAPPING FOR ON-LINE QUERY TOOL, Ser. No. 09/283,268; and ADAPTIVE PARTITIONING TECHNIQUES IN PERFORMING QUERY REQUESTS AND REQUEST ROUTING. Ser. No. 09/282,493; TECHNIQUES FOR PERFORMING, INCREMENTAL DATA UPDATES. Ser. No. 09/283,820.

INT-CL: [07] G06 F 15/00, G06 F 17/30

US-CL-ISSUED: 707/526; 707/2, 707/513

US-CL-CURRENT: 715/526; 707/2, 715/513

FIELD-OF-SEARCH: 707/1-5, 707/513, 707/500-516, 707/100-104, 707/526-530, 345/681, 345/968, 717/115-116

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<u>5717924</u>	February 1998	Kawai	707/101
<u>5950198</u>	September 1999	Falls et al.	707/203
<u>6006230</u>	December 1999	Ludwig et al.	707/10
<u>6189019</u>	February 2001	Blumer et al.	707/513
<u>6199082</u>	March 2001	Ferrel et al.	707/515

ART-UNIT: 2172

PRIMARY-EXAMINER: Kindred; Alford W.

ATTY-AGENT-FIRM: Suchyta; Leonard Charles Weixel; James K.

ABSTRACT:

Disclosed is a system for performing online data queries. The system for performing online data queries is a distributed computer system with a plurality of server nodes each fully redundant and capable of processing a user query request. Each server node includes a data query cache and other caches that may be used in performing data queries. The data query, as well as request allocation, is performed in accordance with an adaptive partitioning technique with a bias towards an initial partitioning scheme. Generic objects are created and used to represent business listings upon which the user may perform queries. Various data processing and integration techniques are included which enhance data queries. An update technique is used for synchronizing data updates as needed in updating the plurality of server nodes. A multi-media data transfer technique is used to transfer non-text or multi-media data between various components of the online query tool.

31 Claims, 71 Drawing figures

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	KWIC	Draw Desc	Image
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☐ 6. Document ID: US 6493721 B1

L11: Entry 6 of 12

File: USPT

Dec 10, 2002

US-PAT-NO: 6493721

DOCUMENT-IDENTIFIER: US 6493721 B1

TITLE: Techniques for performing incremental data updates

<http://westbrs:9000/bin/gate.exe?f=TOC&state=7as6j5.12&ref=11&dbname=PGPB,USPT,USOC,EPAB,JP...> 3/18/05

## Record List Display

Page 8 of 18

DATE-ISSUED: December 10, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Getchius; Jeffrey	Cambridge	MA		
Mortazavi; Ahmad	Sudbury	MA		
Sivasankaran; Rajendran	Waltham	MA		
Venugopal; Ramakrishnan	Chelmsford	MA		

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Verizon Laboratories Inc.	Waltham	MA			02

APPL-NO: 09/ 283820 [PALM]

DATE FILED: March 31, 1999

## PARENT-CASE:

CROSS REFERENCE TO RELATED APPLICATIONS The present application is related to the following ten copending United States patent applications that were filed on Mar. 31, 1999. The titles and serial numbers of the aforementioned applications are as follows: TARGETED BANNER ADVERTISEMENTS, Ser. No. 09/282,764; COMMON TERM OPTIMIZATION, Ser. No. 09/282,356; GENERIC OBJECT FOR RAPID INTEGRATION OF DATA CHANGES Ser. No. 09/283,815; EFFICIENT DATA TRANSFER MECHANISM FOR SYNCHRONIZATION OF MULTI-MEDIA DATABASES, Ser. No. 09/283,816; NEW ARCHITECTURE FOR ON-LINE QUERY TOOL, Ser. No. 09/283,837; DATA ENHANCEMENT TECHNIQUES, Ser. No. 09/282,342; DATA MERGING TECHNIQUES, Ser. No. 09/282,195. WEIGHTED TERM RANKING FOR ON-LINE TOOL, Ser. No. 09/282,730; HYBRID CATEGORY MAPPING FOR ON-LINE QUERY TOOL, Ser. No. 09/283,268; and ADAPTIVE PARTITIONING TECHNIQUES IN PERFORMING QUERY REQUESTS AND REQUEST ROUTING, Ser. No. 09/282,493.

INT-CL: [07] G06 F 17/00

US-CL-ISSUED: 707/104.1; 707/100

US-CL-CURRENT: 707/104.1; 707/100

FIELD-OF-SEARCH: 707/1-5, 707/100-102, 707/500-501, 707/526, 707/531, 705/10, 705/104.1

## PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<u>5369761</u>	November 1994	Conley et al.	707/2
<u>5937402</u>	August 1999	Pandit	707/4
<u>6009410</u>	December 1999	LeMole et al.	705/14

ART-UNIT: 2172

PRIMARY-EXAMINER: Kindred; Alford W.

ATTY-AGENT-FIRM: Suchyta; Leonard Charles Weixel; James K.

## ABSTRACT:

Disclosed is a system for performing online data queries. The system for performing online data queries is a distributed computer system with a plurality of server nodes each fully redundant and capable of processing a user query request. Each server node includes a data query cache

and other caches that may be used in performing data queries. The data query, as well as request allocation, is performed in accordance with an adaptive partitioning technique with a bias towards an initial partitioning scheme. Generic objects are created and used to represent business listings upon which the user may perform queries. Various data processing and integration techniques are included which enhance data queries. An update technique is used for synchronizing data updates as needed in updating the plurality of server nodes. A multimedia data transfer technique is used to transfer non-text or multi-media data between various components of the online query tool. Optimizations for searching, such as the common term optimization, are included for those commonly performed data queries. Also disclosed is a system for targeting advertisements that are displayed to a user of the system.

25 Claims, 71 Drawing figures

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	Draw Desc	Image
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☐ 7. Document ID: US 6484161 B1

L11: Entry 7 of 12

File: USPT

Nov 19, 2002

US-PAT-NO: 6484161

DOCUMENT-IDENTIFIER: US 6484161 B1

TITLE: Method and system for performing online data queries in a distributed computer system

DATE-ISSUED: November 19, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Chipalkatti; Renu	Lexington	MA		
Koyfman; Lazar	Sudbury	MA		
Getchius; Jeffrey	Cambridge	MA		
Venugopal; Ramakrishnan	Chelmsford	MA		
Scofield; Cary	Litchfield	NH		
Moratzavi; Ahmad	Sudbury	MA		
Sivasankaran; Rajendran	Waltham	MA		
Liu; Siping	Framingham	MA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Verizon Laboratories Inc.	Waltham	MA			02

APPL-NO: 09/ 283837 [PALM]

DATE FILED: March 31, 1999

PARENT-CASE:

CROSS REFERENCE TO RELATED APPLICATIONS The present application is related to the following ten copending U.S. patent applications each filed on Mar. 31, 1999, each having its assignee of the entire interest in common with the assignee of the entire interest of the present application, and having titles and serial numbers as follows: TARGETED BANNER ADVERTISEMENTS, Ser. No. 09/282,764; COMMON TERM OPTIMIZATION, Ser. No. 09/282,356; GENERIC OBJECT FOR RAPID INTEGRATION OF DATA CHANGES, Ser. No. 09/283,815; ADAPTIVE PARTITIONING TECHNIQUES IN PERFORMING QUERY REQUESTS AND REQUEST ROUTING, Ser. No. 09/282,493 now U.S. Pat. No. 6,393,415; EFFICIENT DATA TRANSFER MECHANISM FOR SYNCHRONIZATION OF MULTI-MEDIA DATABASES, Ser. No. 09/283,816 now U.S. Pat. No. 6,421,683; DATA ENHANCEMENT TECHNIQUES, Ser. No. 09/282,342 now U.S. Pat. No. 6,397,228; DATA MERGING TECHNIQUES, Ser. No. 09/282,295 now abandoned; TECHNIQUES FOR PERFORMING INCREMENTAL DATA UPDATES, Ser. No. 09/283,820; WEIGHTED TERM RANKING FOR ON-LINE

QUERY TOOL, Ser. No. 09/282,730; and, HYBRID CATEGORY MAPPING FOR ON-LINE QUERY TOOL, Ser. No. 09/283,268.

INT-CL: [07] G06 F 17/30

US-CL-ISSUED: 707/3; 707/2, 707/4, 707/10

US-CL-CURRENT: 707/3; 707/10, 707/2, 707/4

FIELD-OF-SEARCH: 707/10, 707/6, 707/100, 707/2, 707/3, 707/4, 707/1, 707/203, 707/200, 707/201, 709/225

PRIOR-ART-DISCLOSED:

# U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<u>5956716</u>	September 1999	Kenner et al.	707/10
<u>6061515</u>	May 2000	Chang et al.	707/100
<u>6253248</u>	June 2001	Nakai et al.	707/507

ART-UNIT: 2172

PRIMARY-EXAMINER: Corrielus; Jean M.

ATTY-AGENT-FIRM: Suchyta; Leonard Charles Weixel; James K.

## ABSTRACT:

Disclosed is a system for performing online data queries. The system for performing online data queries in a distributed computer system with a plurality of server nodes each fully redundant and capable of processing a user query request. Each server node includes a data query cache and other caches that may be used in performing data queries. The data query, as well as request allocation, is performed in accordance with an adaptive partitioning technique with a bias towards an initial partitioning scheme. Generic objects are created and used to represent business listings upon which the user may perform queries. Various data processing and integration techniques are included which enhance data queries. An update technique is used for synchronizing data updates as needed in updating the plurality of server nodes. A multi-media data transfer technique is used to transfer non-text or multi-media data between various components of the online query tool. Optimizations for searching, such as the common term optimization, are included for those commonly performed data queries. Also disclosed is a system for targeting advertisements that are displayed to a user of the system.

46 Claims, 71 Drawing figures

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	RWD	Draw Desc	Image
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☐ 8. Document ID: US 6421683 B1

L11: Entry 8 of 12

File: USPT

Jul 16, 2002

US-PAT-NO: 6421683

DOCUMENT-IDENTIFIER: US 6421683 B1

TITLE: Method and product for performing data transfer in a computer system

## Record List Display

DATE-ISSUED: July 16, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Lamburt; Leonid	Marlboro	MA		

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Verizon Laboratories Inc.	Waltham	MA			02

APPL-NO: 09/ 283816 [PALM]

DATE FILED: March 31, 1999

INT-CL: [07] G06 F 17/00, G06 F 13/00

US-CL-ISSUED: 707/104; 710/33

US-CL-CURRENT: 707/104.1; 710/33

FIELD-OF-SEARCH: 707/1-2, 707/7, 707/102-104, 707/500, 710/113-130, 710/31-35, 705/1, 705/26, 709/213, 709/231, 709/232, 709/245, 709/248

## PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<u>5734887</u>	March 1998	Kingberg et al.	707/4
<u>5809261</u>	September 1998	Lambrecht	710/128

## OTHER PUBLICATIONS

U.S. application No. 09,282,764, filed Mar. 31, 1999, Targetted Banner Advertisements.

U.S. application No. 09/282,356, filed Mar. 31, 1999, Common Term Optimization.

U.S. application No. 09/283,815, filed 31, 1999, Generic Object for Rapid Integration of Data Changes.

U.S. application No. 09/282,493, filed Mar. 31, 1999, Adaptive Partitioning Techniques in Performing Query Requests and Request Routing.

U.S. application No. 09/283,816, filed Mar. 31, 1999, Efficient Data Transfer Mechanism for Synchronization of Multi-media Databases.

U.S. application No. 09/283,837, filed Mar. 31, 1999, New Architecture for On-Line Query Tool.

U.S. application No. 09/282,342, filed Mar. 31, 1999, Data Enhancement Techniques.

U.S. application No. 09/282,295, filed Mar. 31, 1999, Data Merging Techniques.

U.S. application No. 09/283,820, filed Mar. 31, 1999, Techniques for Performing Incremental Data Updates.

U.S. application No. 09/282,730, filed Mar. 31, 1999, Weighted Term Ranking for On-Line Query Tool.

U.S. application No. 09/283,268, filed Mar. 31, 1999, Hybrid Category Mapping for On-Line Query Tool.

ART-UNIT: 2172

PRIMARY-EXAMINER: Vu; Kim

ASSISTANT-EXAMINER: Kindred; Alford W.

ATTY-AGENT-FIRM: Suchyta; Leonard Charles Weixel; James K.



## ABSTRACT:

Disclosed is a system for performing online data queries. The system for performing online data queries is a distributed computer system with a plurality of server nodes each fully redundant and capable of processing a user query request. Each server node includes a data query cache and other caches that may be used in performing data queries. The data query, as well as request allocation, is performed in accordance with an adaptive partitioning technique with a bias towards an initial partitioning scheme. Generic objects are created and used to represent business listings upon which the user may perform queries. Various data processing and integration techniques are included which enhance data queries. An update technique is used for synchronizing data updates as needed in updating the plurality of server nodes. A multi-media data transfer technique is used to transfer non-text or multi-media data between various components of the online query tool. Optimizations for searching, such as the common term optimization, are included for those commonly performed data queries. Also disclosed is a system for targeting advertisements that are displayed to a user of the system.

20 Claims, 71 Drawing figures

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	Draw Desc	Image
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☐ 9. Document ID: US 6408294 B1

L11: Entry 9 of 12

File: USPT

Jun 18, 2002

US-PAT-NO: 6408294

DOCUMENT-IDENTIFIER: US 6408294 B1

TITLE: Common term optimization

DATE-ISSUED: June 18, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Getchius; Jeffrey	Cambridge	MA		
Lamburt; Leonid	Marlboro	MA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Verizon Laboratories Inc.	Waltham	MA			02

APPL-NO: 09/ 282356 [PALM]

DATE FILED: March 31, 1999

PARENT-CASE:

CROSS REFERENCE TO RELATED APPLICATIONS The instant application is related to the following ten copending U.S. patent applications each filed on Mar. 31, 1999, each having its assignee of the entire interest in common with the assignee of the entire interest of the present application, and having titles and serial numbers as follows: TARGETED BANNER ADVERTISEMENTS, Ser. No. 09/282,764; NEW ARCHITECTURE FOR ONLINE QUERY TOOL, Ser. No. 09/283,837; GENERIC OBJECT FOR RAPID INTEGRATION OF DATA CHANGES, Ser. No. 09/283,815; ADAPTIVE PARTITIONING TECHNIQUES IN PERFORMING QUERY REQUESTS AND REQUEST ROUTING, Ser. No. 09/282,493; EFFICIENT DATA TRANSFER MECHANISM FOR SYNCHRONIZATION OF MULTI-MEDIA DATABASES, Ser. No. 09/283,816; DATA ENHANCEMENT TECHNIQUES, Ser. No. 09/282,342; DATA MERGING TECHNIQUES, Ser. No. 09/282,295; TECHNIQUES FOR PERFORMING INCREMENTAL DATA UPDATES, Ser. No. 09/283,820; WEIGHTED TERM RANKING FOR ON-LINE QUERY TOOL, Ser. No. 09/282,730; and, HYBRID CATEGORY MAPPING FOR ON-LINE QUERY TOOL, Ser. No. 09/283,268.

INT-CL: [07] G06 F 17/30

US-CL-ISSUED: 707/5; 707/4

US-CL-CURRENT: 707/5; 707/4

FIELD-OF-SEARCH: 707/5, 707/3, 707/4, 707/6, 707/7, 707/104, 707/514, 707/531, 704/7

PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<u>5619410</u>	April 1997	Emori et al.	704/7
<u>5845278</u>	December 1998	Kirsch et al.	707/3
<u>5943669</u>	August 1999	Numata	707/5
<u>5995979</u>	November 1999	Cochran	707/104
<u>6101515</u>	August 2000	Wical et al.	707/531
<u>6128613</u>	October 2000	Wong et al.	707/7
<u>6212517</u>	April 2001	Sato et al.	707/5
<u>6243723</u>	June 2001	Ikeda et al.	707/514

ART-UNIT: 2172

PRIMARY-EXAMINER: Shah; Sanjiv

ATTY-AGENT-FIRM: Suchyta; Leonard Charles Weixel; James K.

## ABSTRACT:

Disclosed is a system for performing online data queries. The system for performing online data queries is a distributed computer system with a plurality of server nodes each fully redundant and capable of processing a user query request. Each server node includes a data query cache and other caches that may be used in performing data queries. The data query, as well as request allocation, is performed in accordance with an adaptive partitioning technique with a bias towards an initial partitioning scheme. Generic objects are created and used to represent business listings upon which the user may perform queries. Various data processing and integration techniques are included which enhance data queries. An update technique is used for synchronizing data updates as needed in updating the plurality of server nodes. A multi-media data transfer technique is used to transfer non-text or multi-media data between various components of the online query tool. Optimizations for searching, such as the common term optimization, are included for those commonly performed data queries. Also disclosed is a system for targeting advertisements that are displayed to a user of the system.

21 Claims, 71 Drawing figures

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	KWIC	Draw Desc	Image
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☐ 10. Document ID: US 6397228 B1

L11: Entry 10 of 12

File: USPT

May 28, 2002

US-PAT-NO: 6397228

DOCUMENT-IDENTIFIER: US 6397228 B1

TITLE: Data enhancement techniques

<http://westbrs:9000/bin/gate.exe?f=TOC&state=7as6j5.12&ref=11&dbname=PGPB,USPT,USOC,EPAB,JP...> 3/18/05

## Record List Display

Page 14 of 18

DATE-ISSUED: May 28, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Lamburt; Leonid	Marlboro	MA		
Koyfman; Lazar	Sudbury	MA		

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Verizon Laboratories Inc.	Waltham	MA			02

APPL-NO: 09/ 282342 [PALM]

DATE FILED: March 31, 1999

## PARENT-CASE:

CROSS REFERENCE TO RELATED APPLICATION The present application is related to the following ten copending United States patent applications each filed on Mar. 31, 1999, each having its assignee of the entire interest in common with the assignee of the entire interest of the present application, and having titles and serial numbers as follows: TARGETED BANNER ADVERTISEMENTS, Ser. No. 09/282,764; COMMON TERM OPTIMIZATION, Ser. No. 09/282,356; GENERIC OBJECT FOR RAPID INTEGRATION OF DATA CHANGES, Ser. No. 09/283,815; ADAPTIVE PARTITIONING TECHNIQUES IN PERFORMING QUERY REQUESTS AND REQUEST ROUTING, Ser. No. 09/282,493; EFFICIENT DATA TRANSFER MECHANISM FOR SYNCHRONIZATION OF MULTI-MEDIA DATABASES, Ser. No. 09/283,816; NEW ARCHITECTURE FOR ON-LINE QUERY TOOL, Ser. No. 09/283,837; DATA MERGING TECHNIQUES, Ser. No. 09/282,295; TECHNIQUES FOR PERFORMING INCREMENTAL DATA UPDATES, Ser. No. 09/283,820; WEIGHTED TERM RANKING FOR ON-LINE QUERY TOOL, Ser. No. 09/282,730; and, HYBRID CATEGORY MAPPING FOR ON-LINE QUERY TOOL, Ser. No. 09/283,268.

INT-CL: [07] G06 F 17/30

US-CL-ISSUED: 707/203; 200/201

US-CL-CURRENT: 707/203; 200/201

FIELD-OF-SEARCH: 707/203, 707/200, 707/202, 707/201, 382/169, 382/124, 382/302

## PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<u>4003024</u>	January 1977	Riganati et al.	382/302
<u>4365304</u>	December 1982	Ruhman et al.	382/169
<u>5187747</u>	February 1993	Capello et al.	382/124
<u>5802527</u>	September 1998	Brechtel et al.	707/200
<u>6073140</u>	June 2000	Morgan et al.	707/203

ART-UNIT: 2172

PRIMARY-EXAMINER: Shah; Sanjiv

ATTY-AGENT-FIRM: Suchyta; Leonard Charles Weixel; James K.

## ABSTRACT:

Disclosed is a system for performing online data queries. The system for performing online data

<http://westbrs:9000/bin/gate.exe?f=TOC&state=7as6j5.12&ref=11&dbname=PGPB,USPT,USOC,EPAB,JP...> 3/18/05

queries is a distributed computer system with a plurality of server nodes each fully redundant and capable of processing a user query request. Each server node includes a data query cache and other caches that may be used in performing data queries. The data query, as well as request allocation, is performed in accordance with an adaptive partitioning technique with a bias towards an initial partitioning scheme. Generic objects are created and used to represent business listings upon which the user may perform queries. Various data processing and integration techniques are included which enhance data queries. An update technique is used for synchronizing data updates as needed in updating the plurality of server nodes. A multi-media data transfer technique is used to transfer non-text or multi-media data between various components of the online query tool. Optimizations for searching, such as the common term optimization, are included for those commonly performed data queries. Also disclosed is a system for targeting advertisements that are displayed to a user of the system.

35 Claims, 71 Drawing figures

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	Draw Desc	Image
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☐ 11. Document ID: US 6393415 B1

L11: Entry 11 of 12

File: USPT

May 21, 2002

US-PAT-NO: 6393415

DOCUMENT-IDENTIFIER: US 6393415 B1

TITLE: Adaptive partitioning techniques in performing query requests and request routing

DATE-ISSUED: May 21, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Getchius; Jeffrey	Cambridge	MA		
Scofield; Cary	Litchfield	NH		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Verizon Laboratories Inc.	Waltham	MA			02

APPL-NO: 09/ 282493 [PALM]

DATE FILED: March 31, 1999

PARENT-CASE:

CROSS REFERENCE TO RELATED APPLICATIONS The present application is related to the following ten copending United States patent applications each filed on Mar. 31, 1999, each having its assignee of the entire interest in common with the assignee entire interest of the present application, and having titles and serial numbers as follow TARGETED BANNER ADVERTISEMENTS, Ser. No. 09/282,764; now pending COMMON TERM OPTIMIZATION, Ser. No. 09/282,356; now pending GENERIC OBJECT FOR RAPID INTEGRATION OF DATA CHANGES, Ser. No. 09/283,815; now pending EFFICIENT DATA TRANSFER MECHANISM FOR SYNCHRONIZATION OF MULTI-MEDIA DATABASES, Ser. No. 09/283,816; now pending NEW ARCHITECTURE FOR ON-LINE QUERY TOOL, Ser. No. 09/283,837; now pending DATA ENHANCEMENT TECHNIQUES, Ser. No. 09/282,342; now pending DATA MERGING TECHNIQUES, Ser. No. 09/282,295; now abandoned TECHNIQUES FOR PERFORMING INCREMENTAL DATA UPDATES, Ser. No. 09/283,820; now pending WEIGHTED TERM RANKING FOR ON-LINE QUERY TOOL, Ser. No. 09/282,730; now pending and, HYBRID CATEGORY MAPPING FOR ON-LINE QUERY TOOL, Ser. No. 09/283,268 now pending.

INT-CL: [07] G06 F 17/30

US-CL-ISSUED: 707/2; 707/3

US-CL-CURRENT: 707/2; 707/3

FIELD-OF-SEARCH: 707/2, 707/3, 707/4, 707/1, 709/225

PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<u>5898780</u>	April 1999	Liu et al.	380/25
<u>5941947</u>	August 1999	Brown et al.	709/225
<u>6092061</u>	July 2000	Choy	707/1
<u>6098066</u>	August 2000	Snow et al.	707/3
<u>6178418</u>	January 2001	Singer	707/3

ART-UNIT: 2172

PRIMARY-EXAMINER: Shah; Sanjiv

ATTY-AGENT-FIRM: Suchyta; Leonard Charles Weixel; James K.

## ABSTRACT:

Disclosed is a system for performing online data queries. The system for performing online data queries is a distributed computer system with a plurality of server nodes each fully redundant and capable of processing a user query request. Each server node includes a data query cache and other caches that may be used in performing data queries. The data query, as well as request allocation, is performed in accordance with an adaptive partitioning technique with a bias towards an initial partitioning scheme. Generic objects are created and used to represent business listings upon which the user may perform queries. Various data processing and integration techniques are included which enhance data queries. An update technique is used for synchronizing data updates as needed in updating the plurality of server nodes. A multimedia data transfer technique is used to transfer non-text or multi-media data between various components of the online query tool. Optimizations for searching, such as the common term optimization, are included for those commonly performed data queries. Also disclosed is a system for targeting advertisements that are displayed to a user of the system.

12 Claims, 71 Drawing figures

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWC	Draw. Desc	Image
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☐ 12. Document ID: US 6374241 B1

L11: Entry 12 of 12

File: USPT

Apr 16, 2002

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TITLE: Data merging techniques

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PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<u>5274802</u>	December 1993	Altine	707/1
<u>5398335</u>	March 1995	Lewis	707/1
<u>5412566</u>	May 1995	Sawa	364/419.14
<u>5717924</u>	February 1998	Kawai	707/102
<u>5819092</u>	October 1998	Ferguson et al.	395/701
<u>5819291</u>	October 1998	Haimowitz et al.	707/6
<u>5950198</u>	September 1999	Falls et al.	707/8
<u>5960430</u>	September 1999	Haimowitz et al.	707/6
<u>6182083</u>	January 2001	Scheifler et al.	707/103

ART-UNIT: 2172

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## ABSTRACT:

Disclosed is a system for performing online data queries. The system for performing online data queries is a distributed computer system with a plurality of server nodes each fully redundant and capable of processing a user query request. Each server node includes a data query cache and other caches that may be used in performing data queries. The data query, as well as request allocation, is performed in accordance with an adaptive partitioning technique with a bias towards an initial partitioning scheme. Generic objects are created and used to represent business listings upon which the user may perform queries. Various data processing and integration techniques are included which enhance data queries. An update technique is used for synchronizing data updates as needed in updating the plurality of server nodes. A multi-media data transfer technique is used to transfer non-text or multi-media data between various components of the online query tool. Optimizations for searching, such as the common term optimization, are included for those commonly performed data queries. Also disclosed is a system for targeting advertisements that are displayed to a user of the system.